
Two New Species of *Dracaena* (Asparagaceae, Nolinoideae) from Central Africa, with a Note on the Identity of *D. braunii*

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ABSTRACT. Two new species of *Dracaena* Vand. ex L. (Asparagaceae, Nolinoideae) from Central Africa are here described and illustrated. *Dracaena longipetiolata* Mwachala & Eb. Fisch. from Gabon is distinguished from *D. phrynioides* Hook. by its long petioles and elliptic leaves. *Dracaena litoralis* Mwachala & Eb. Fisch. is described from Cameroon and also occurs in Equatorial Guinea, Gabon, and Congo-Brazzaville. This new taxon differs from *D. braunii* Engl. by its smaller flowers whose perianth lobes are shorter than the tube. The identity of *D. braunii* is discussed and its affinity with *D. litoralis* analyzed.

Key words: Asparagaceae, Central Africa, Cameroon, Congo-Brazzaville, *Dracaena*, Equatorial Guinea, Gabon, IUCN Red List.

Dracaena Vand. ex L. belongs to the family Asparagaceae, subfamily Nolinoideae, according to the APG III classification (Stevens, 2008; APG III, 2009; Chase et al., 2009). This subfamily is represented in Central and East Africa by three genera, namely *Dracaena*, *Eriospermum* Jacq. ex Willd., and *Sansevieria* Thunb. (APG III, 2009). While preparing a revision of *Dracaena* for Flora of Tropical East Africa, several unidentified specimens came to light that represent new species, two of which have already been described (Mwachala et al., 2007; Mwachala & Cheek, 2012). Two further new taxa are described in the present paper.

Dracaena longipetiolata Mwachala & Eb. Fisch. sp. nov. TYPE: Gabon. Crystal Mtns., 12 km SW of chutes de Kinguele [Kinguele Falls], 18 Feb. 1966, N. Hallé & J. F. Villiers 5362 (holotype, P). Figure 1.

Dracaenae phrynioidi Hook. affinis, sed ab ea petiolo exalato plus quam 20 cm longo et longitudinem laminae ellipticae duplo excedente valde differt.

Herb with subterranean rhizome; plants to 35 cm tall, petioles 37–85 cm, 2–3 mm wide, wingless. Leaf lamina elliptic, widest at middle, rounded at the base, acuminate at the apex, 25–30 × 8.5–10 cm, main parallel veins visible on adaxial surface, reticulate venation with secondary venation anastomosing between main parallel veins prominent on abaxial surface, midrib conspicuous abaxially, ending before leaf apex, discolourous, dark green on adaxial surface and rusty brown on abaxial surface. Rachis of inflorescence to 35 cm, 1.5–2 mm diam.; inflorescence paniculate, appearing spikelike, fruits on lateral glomerules (condensed lateral partial inflorescences), each glomerule with ca. 5 pedicels; pedicels not exceeding 1 mm. Flowers not known. Fruit an ellipsoid, 3-lobed berry, 15 × 8 mm.

Distribution and habitat. *Dracaena longipetiolata* is known only from the type collection from the Crystal Mountains in Gabon. The new species was found in riverine vegetation, in submontane rainforest.

IUCN Red List category. *Dracaena longipetiolata* is assessed as DD or Data Deficient, according to IUCN (2001) criteria. More exploration in the Crystal Mountains is required to establish the range and habitat requirements for this species.

Discussion. This new taxon clearly belongs to the *Dracaena aubryana* Brongn. ex E. Morren group of Mwachala (2005), based on its herbaceous habit usually not exceeding 1 m in height and its possession of a distinct petiole that is at least half as long as the lamina. It differs from *D. phrynioides* Hook. by its greatly reduced stems and the wingless petioles. These are between 37 and 85 cm in length, and over twice as long as the leaf lamina, which is elliptic. While also having very short stems, *D. phrynioides* has a leaf lamina much shorter and not exceeding 25 cm, about equaling the petiole, and is ovate-lanceolate in shape.

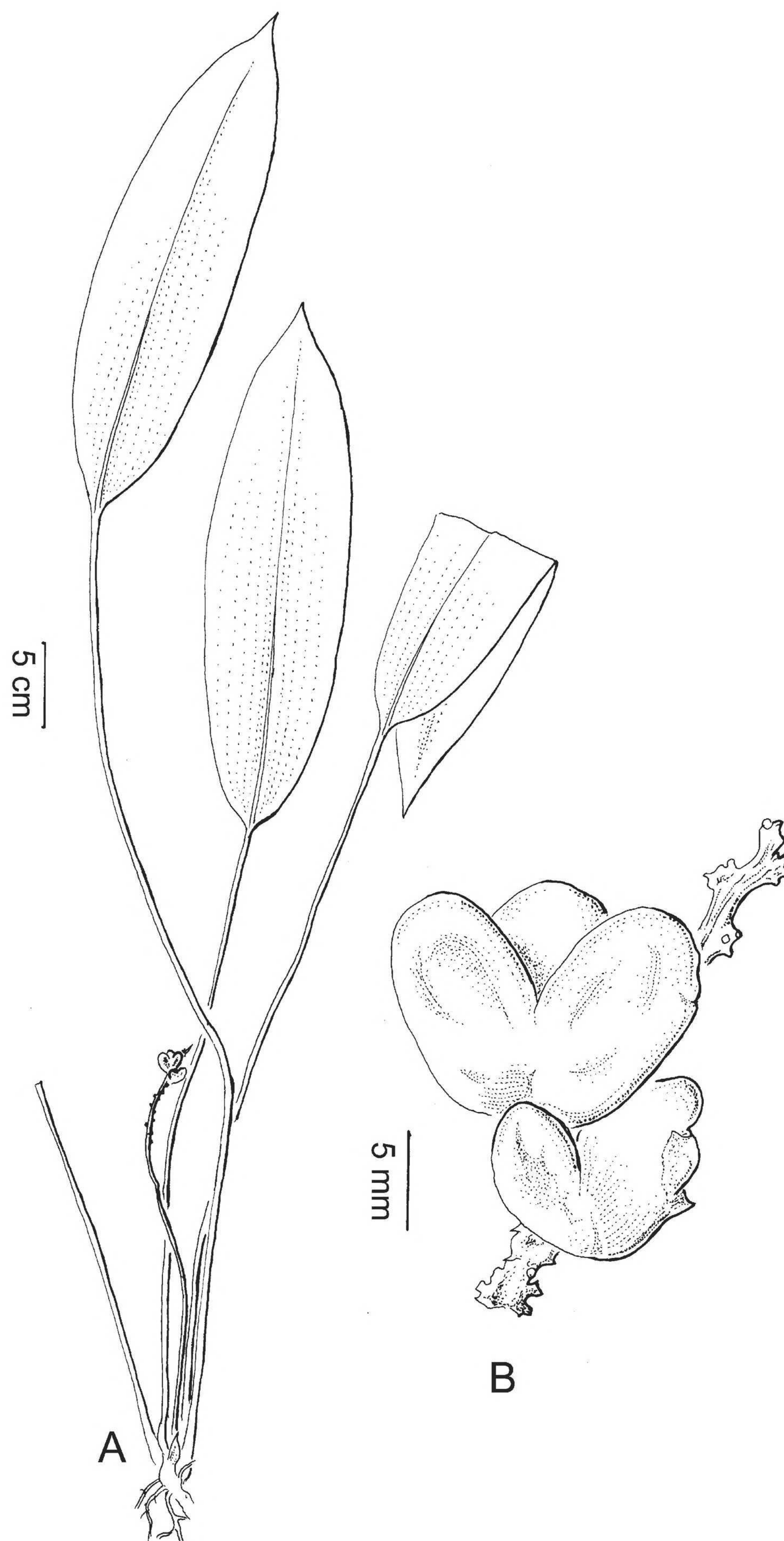


Figure 1. *Dracaena longipetiolata* Mwachala & Eb. Fisch. —A. Fertile habit. —B. Part of infructescence. Drawn from the holotype, N. Hallé & J. F. Villiers 5362 (P).

Despite the fact that flowers are presently unknown and the specimens bear only mature fruits, we describe this new species as it shows very distinctive features and can be easily recognized.

Dracaena braunii Engl. in Baker and Engl., Bot. Jahrb. Syst. 15: 479, taf. XX (20). 1893 [1892].
TYPE: Cameroon: “Kamerun, Malimba,” 1889, J. Braun 329 (holotype, B). Figure 2.

Baker and Engler (1893: 479) described *Dracaena braunii* based on a plant from Malimba, Cameroon. The protologue stated that the plant was imported by J. Braun and cultivated in the Botanical Garden of Berlin, where it subsequently flowered in August 1891. The type for this species (*J. Braun 329*), comprising a single flowering shoot and a reproduction of the plate published in the protologue, is still at Berlin. The specimen matches the apex of the flowering stem depicted in Baker and Engler (1893) and was probably prepared from the same plant. When Engler's type and protologue were checked against material determined as *D. braunii* in BR, K, LBV, P, and WAG, the morphologies did not match. The most important differences were the leaf shape, leaf arrangement, and flower size. No material was found in any of these herbaria that matched *Braun 329* or Engler's protologue and illustration of *D. braunii*. The examined specimens thus represent a new species, *D. litoralis*, which is described here for the first time. A systematic search should be conducted in the coastal areas of Cameroon and Gabon to relocate *D. braunii*, which is at present known only from the type and the plate accompanying the protologue. *Dracaena braunii* is distinguished from *D. litoralis* by its phyllotaxy, with its leaves being spaced along the stem, unlike the basal rosette in *D. litoralis*. Its petioles are 2–3 cm long, much shorter than the 8–14 cm long petioles in *D. litoralis*. The leaf lamina in *D. braunii* is up to 6 cm long, whereas it ranges from 8 to 12 cm in *D. litoralis*. The flowers of *D. braunii* are longer than those of *D. litoralis*, being about 2.3 cm long, compared to a maximum of 1.5 cm long in *D. litoralis*. Furthermore, the perianth lobes of *D. braunii* are longer than the tube, whereas these are shorter than the tube in *D. litoralis*.

Dracaena litoralis Mwachala & Eb. Fisch. sp. nov.

TYPE: Cameroon. Kribi District: betw. Kribi & Lonji, 19 Mar. 1968, *P. Mezili 90* (holotype, P). Figure 3.

Dracaenae braunii Engl. affinis, sed ab ea foliis rosulatis, petiolo valde longiore, lamina foliari longiore, floribus brevioribus et lobis perianthii brevioribus quam tubo differt.

Herb to 30 cm high, single-stemmed; stem to 1.5 mm diam.; rhizome and roots orange. Leaves clustered near the base of the shoot; blades narrowly elliptic to broadly lanceolate, 8–12 × 2.5–3 cm, base cuneate, apex acuminate; petiole 8–14 cm, with an amplexicaule base forming a sheath to 3 cm long. Inflorescence terminal, erect, spicate, 6 cm; peduncle 19 cm; flowers in clusters of 1 to 3; bracts triangular,

to 2 mm; pedicels 2 mm, articulate above the middle. Flowers pale white tinged with purple, perianth lobes 4–5 × 0.6–0.8 mm, perianth tube 7–8 mm long. Stamen filaments white, anthers creamy. Fruits globose, 1–1.2 × 0.6–1 cm, 1- to 3-seeded; seeds bony globose in single-seeded fruits, (sub)hemispheric in 2- or 3-seeded ones, 0.8–1 cm diam.

Distribution and habitat. *Dracaena litoralis* was collected in coastal regions of Cameroon, Equatorial Guinea, Gabon, and the Republic of Congo. The taxon has been found in undergrowth in deep shade at edge of coastal forests, comprised of mangroves, to 2–5 m height.

IUCN Red List category. *Dracaena litoralis* is assessed as Vulnerable or VU Blab(iii), according to IUCN (2001). It is known from the beaches of South Cameroon, Equatorial Guinea, Gabon, and the Republic of Congo, which are prime development sites for plantations, petroleum, and tourism.

Discussion. *Dracaena litoralis* is closely related to *D. braunii* from which it differs in the phyllotaxy. Its leaves are arranged in a rosette at the base of the stem, while those of *D. braunii* are evenly spaced out along the stem. The petioles are longer in the new species (8–14 cm vs. 2–3 cm in *D. braunii*), and the leaf lamina is longer (8–12 cm vs. less than 6 cm). The flowers are shorter (to 1.5 cm long vs. 2.3 cm), with the perianth lobes shorter than the tube, 4–5 mm and 7–8 mm, respectively, versus the perianth more subequal, with the lobes 1.3 cm and the tube ca. 1 cm in *D. braunii*.

Paratypes. CAMEROON. **Kribi:** betw. Kribi & Lonji, 19 Mar. 1968, *P. Mezili 90* (P); 23 km on rd. from Kribi to Campo, 6 Dec. 1974, *J. J. F. E. De Wilde 7819* (BR, P); 22 km Sud de Kribi, 3 Jan. 1983, *A. P. M. van der Zon 1972* (P); 10 km env. de Kribi, 19 Feb. 1965, *Letouzey 13494* (P); ca. 8 km N of Kribi, 8 Aug. 1964, *W. J. J. O. de Wilde & B. E. E. de Wilde-Duyffes 2907* (P); chutes de Lobé, 6 Jan. 1968, *Bamps 1708* (BR); near Rocher du Loup, 17 Mar. 1978, *Lowe 3614* (K). EQUATORIAL GUINEA. **Bata:** alrededores de Akonikieng, bosque secundario, 7 Feb. 1992, *Carvalho 5011* (BR). GABON. **Port Gentil:** 1 July 1966, *A. Le Thomas 10* (P); SE of Port Gentil, 16 Sep. 1968, *F. J. Breteler & R. A. van Raalte 556* (BR); betw. Mayumba & Nyanga, Mar. 1903, *H. Pobéguin s.n.* (P); **Mayumba:** 23 Jan. 1907, *G. Le Testu 970* (BR); Mayumba peninsula, ± 15 km S of Mayumba town, 18 Nov. 1983, *J. J. F. E. De Wilde et al. 654* (K, P); behind Okala, 18 Feb. 1993, *Dibata 1111* (BR); **Estuaire:** peninsula of Cap Esterias, 8 Dec. 2003, *C. C. H. Jongkind & R. Niangadouma 5895* (LBV); **Pointe Denis:** Pongara, Ovingombé, 20 Dec. 1999, *E. L. A. N. Simons & R. Westerduijn 501* (LBV); **Littoral:** Bois de Singes, 29 Mar. 1986, *H. de Foresta 869* (P); Kouilou, PCA de Nzambi, entre N'tietie et le Carrefour du Gabon, 30 Jan. 1974, *P. Sita 3621* (P).

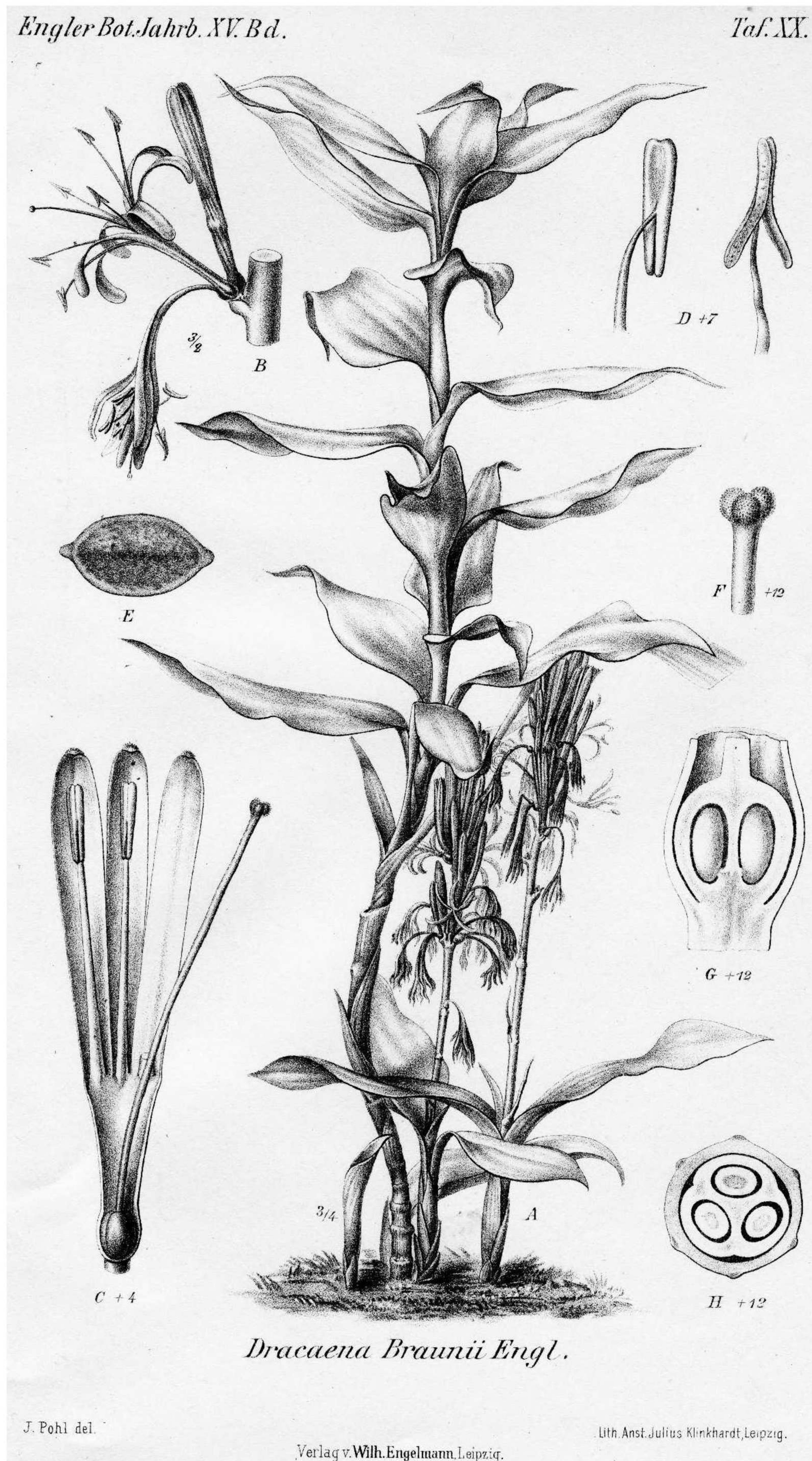


Figure 2. *Dracaena braunii* Engl. Plate detail clockwise from bottom: habit, showing vegetative and fertile shoots; flower laid open; seed; portion of inflorescence; stamens; style and stigma; ovary in longitudinal section; ovary in cross-section. Plate 20 from Engler 1893: 479. Drawing from J. Braun 329 (B).

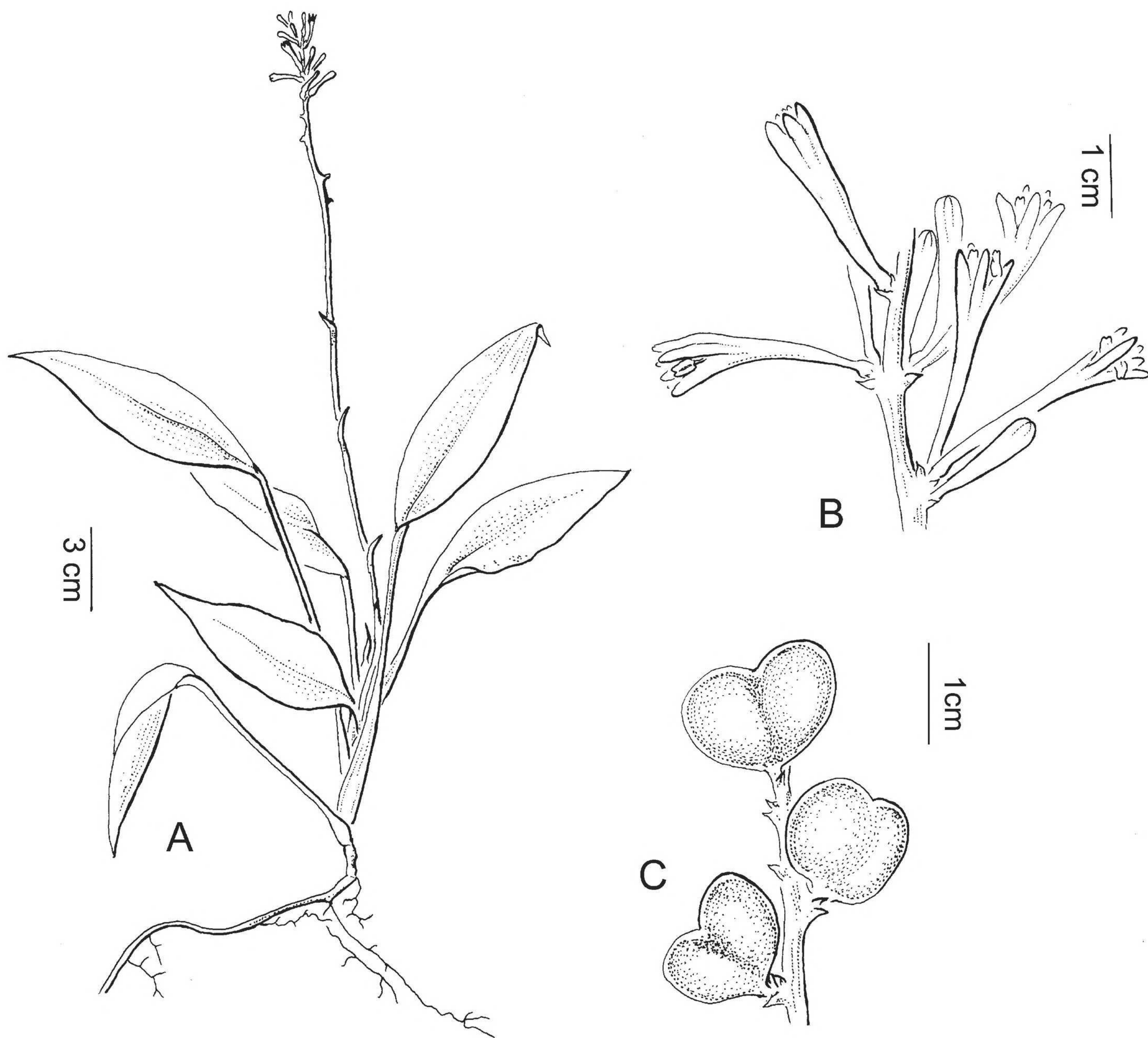


Figure 3. *Dracaena litoralis* Mwachala & Eb. Fisch. —A. Fertile habit. —B. Intact flowers from portion of inflorescence axis. —C. Fruits. Drawn from the paratype G. Le Testu 970 (BR).

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